Women on Audit Committees and the relationship between Related Party Transactions and Earnings Management: Evidence from India

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Abstract: The paper examines the relationship between Related Party Transactions (RPTs) and earnings management and how the aforesaid relationship is affected by the presence of women directors on audit committees. We conduct empirical analysis on the largest 500 firms listed on India's National Stock Exchange. While our results indicate a weak relationship between RPTs and earnings management, there is a significantly positive relationship between discretionary accruals and the presence of a woman as the Chair of the Audit committee. Besides, our paper offers several interesting insights into existing corporate governance standards in some of India's largest listed firms

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1. Introduction:

Related Party Transactions continue to be rated as the biggest threat to Indian corporate governance today (OECD, 2014). Under Indian Accounting Standard – 18 on Related Party Disclosures, parties are said to be related if "if at any time during the reporting period one party has the ability to control the other party or exercise significant influence over the other party in making financial and/or operating decisions". While RPTs are looked upon with scepticism globally, the unique ownership structure of Indian firms makes them more vulnerable to abuse. The Indian corporate sector is characterised largely by the presence of family firms, often organised in the form of business groups. Pyramidal structures are employed to create divergence between voting and cash flow rights and retain ownership in the hands of the ultimate owner. The Satyam scandal in India highlighted the serious inadequacies in the regulation of RPTs in India and prompted reform in that area. While regulators recognise the fact that RPTs could be employed for several reasons including genuine business ones, the difficulty in their identification and in the determination of arms-length values makes them a greater cause for concern for listed Indian firms.

The relationship between the use of RPTs and earnings management objectives of corporate managers is a well-researched area. In its most common meaning, earnings management refers to the act of opportunistically reporting accounting numbers with a view to either smooth income over time or achieve specific targets such as meeting analyst expectations, receive import relief, earn performance bonus etc. (Healy & Wahlen, 1999). Interestingly, papers have found evidence of 'tunnelling' in Indian business groups, which is also consistent with the use of RPTs to achieve earnings management (Bertrand, Mehta, & Mullainathan, 2002). Tunnelling is a specific form of RPT that involves transfer of profitability from a low-cash flow to a higher cash-flow right business group firm, in order to maximise cash flows for the majority shareholder, at the expense of the minority.

We extend the RPT-earnings management argument by introducing the dynamics of gender diversity to the relationship for Indian firms, where the use of RPTs is rampant and recent regulatory reform has mandated the induction of at least one woman director on the boards of listed companies. We choose to study gender diversity on audit committees, rather than at the board-level because the provisions of the new Companies Act, 2013 cast onerous responsibility on the audit committee, in terms of identification and approval of RPTs that the management may wish to undertake. The audit committee is a specialised committee of the board which is entrusted with the responsibility of overseeing the quality of overall financial reporting process within the firm. Starting April 1, 2014 (also the start of our sample), no RPT can be initiated unless approved by this committee, granting it absolute power over such transactions. This is in contrast to its erstwhile powers which included a mere review of the firm's RPTs, once they had taken place.

Gender studies document higher moral standards (Bernandi & Arnold, 1997), greater risk-aversion (Barber & Odean, 2001; Estes & Hosseini, 1988) and greater sensitivity to ethical concerns (Gilligan, 1977) for women, on an average, when compared to their male counterparts. There exists a well-developed literature on the relationship between women directors and earnings management (Srinidhi, Gul, & Tsui, 2011; Thiruvadi & Huang, 2011) and between women directors and greater accounting conservatism (Francis, Hasan, Park, & Wu, 2015; Peni & Vahamaa, 2010). Most of these studies document that women directors are associated with lower accrual-based earnings management.

When applied to the audit committee setting, it could indicate that gender-diverse audit committees (with one or more women on board) could reflect greater conservatism in approving RPTs, particularly those that appear, prima facie, more prone to earnings management, in their opinion. We expect such behaviour to alter the RPT-earnings management relationship.

This research question is particularly important in the contemporary Indian corporate scenario where regulators are leaving no stone unturned to enable women directors to break the glass ceiling. SEBI, the Indian capital markets regulator, has mandated the presence of at least one woman director on the boards of all listed firms, with effect from March 31, 2015. However, given the family-dominated businesses in India, one suspects that most firms will attempt to comply with the letter of the new law, by nominating a woman member of the family. We address this concern in our empirical tests.

The paper is organised as follows: section 2 discusses the literature review, section 3 discusses the hypotheses development, section 4 discusses the data sources and empirical methodology, section 5 presents univariate statistics and empirical results and finally, section 6 offers concluding remarks.

2. Literature Review

2.1 Women directors and earnings quality/ conservatism

In the last decade or so, gender diversity and its impact on earnings quality has gained considerable attention in the accounting research arena. This has had to do, in part, with the global attempt towards breaking the 'glass ceiling' by making gender representation mandatory on corporate boards. Interestingly, results about the impact of the presence of women on earnings quality have been largely skewed in favour of greater risk aversion and better earnings quality for either female-led firms or firms whose boards have women directors.

Using a sample of listed American firms over the period 2001-2007 and discretionary accruals as their measure for earnings management, Srinidhi et al. (2011) find that the presence of female directors on the board results in both better reporting discipline and earnings quality. The results are more pronounced when women directors occupy positions in the firm's audit committee. Using a sample of 175 firms out of the S&P 500 over the period 2003 to 2005, Sun et al. (2011) focus their attention on the presence of women on fully independent audit committees. Using the Jones (1991) discretionary accruals as their measure of earnings management, they find no association between the proportion of women on the audit committee and the degree of earnings management. Thiruvadi and Huang (2011) investigate the link between gender diversity on the audit committee and earnings management using 320 of the S&P 600 firms. They find that the female presence on the audit committee is associated with both higher income-decreasing accruals and audit committee meeting frequency, implying both better financial reporting and corporate governance outcomes.

Francis et al. (2015) examine the impact of CFO gender on accounting conservatism in the context of S&P 1500 firms. They focus on firms that experience CFO changes from male to female over the period 1988-2007 and compare the degree of accounting conservatism in the pre and post transition periods. They find that female CFOs are more risk averse than male CFOs which in turn results in them adopting more conservative accounting policies. Further, higher risk aversion in female CFOs also manifests itself in less equity-based compensation, a lower dividend payout, lower firm risk and higher tangibility levels. Peni and Vahamaa (2010) examine the association between earnings management and the gender of the firm's executives (in particular, the firm's CEO and CFO) for the S&P 500 firms over 2003-07. They find that female CFOs are associated with more conservative financial reporting. They find no results with female CEOs. Vahamaa (2014) examines the link between CFO turnover and earnings management. For the S&P 1,500 firms over the period 2004-06, they find that firms that move from a male to female CFO tend to adopt more conservative financial reporting practises, as measured by the Dechow and Dichev (2002) measure of accruals. Specifically, discretionary accruals tend to become more negative if a female CFO replaces a male, while the opposite is noted if the CFO of either gender is replaced by a male.

Krishnan and Parsons (2008) examine the link between women in senior management positions and earnings quality by looking at both earnings management and accounting conservatism. The latter is measured using Basu's measure for asymmetric timeliness of accounting earnings (Basu, 1997) and earnings skewness. Using 353 firms out of the Fortune 500 for the period 1996-2000, they find that earnings quality is positively associated with gender diversity in senior management.

Lakhal et al. (2015) extend the gender diversity question to the case of French listed firms. Based on a sample of 170 firms over 4 years, they find that the proportion of women on the board, either as a director or board chair reduces earnings management. This sheds light on the role of women directors as an important corporate governance mechanism. They also find that the relationship between the presence of at least three women on the board and earnings management is negative, suggesting that a threshold of three women can enhance monitoring effectiveness of the board. In their sample, however, women CEOs and CFOs do not affect earnings management practices. Using a sample of Israeli high-technology firms listed in the USA between 2009 and 2009, Gavious et al. (2012) find a negative relationship between female directors and earnings management on the one hand, and a positive relationship between female directors and firm value, on the other. The results hold for female CEOs and CFOs too. On the corporate governance front, they find that for firms with higher female representation on boards, external monitoring by auditors and creditors is weaker. Yet, earnings quality for such firms is higher. This highlights the incremental monitoring role of women directors.

Kyaw et al. (2015) examine the impact of gender diversity on earnings management in European countries. Using a sample of all European countries for which Board Gender Diversity (BGD) data is available in the Thomson Reuters Asset4 database (with a final sample of 970 companies over the period 2002-13), they find that gender diversity constrains earnings management only in countries with a good degree of gender equality. This offers an explanation to the inconclusive gender study findings for European countries. Arun et al. (2015) study the impact of gender diversity on earnings management for listed UK firms over the period 2005-11.They find that firms with a higher proportion of female and female independent directors exhibit greater accounting conservatism and more income-decreasing accruals. Further, female directors on the boards of high-debt firms have no impact on earnings management. This points to the monitoring role of female directors as a substitute for creditor monitoring.

Literature in the emerging economies' context is rather scarce and most of it is concentrated in China. Liu et al. (2016) examine the effect of CFO gender on earnings management in Chinese listed firms over the period 1999-2011. Multivariate regression results indicate that female CFO firm-years have significantly lower discretionary current accruals, lower total accruals, lower abnormal production costs and higher abnormal discretionary expenses than male CFO firm-years. CFO-transition test results indicate that departing male CFOs are more aggressive than the departing female CFOs in managing earnings upwards during their last year with the firm, possibly in an attempt to save their jobs or obtain bigger retirement packages. Newly appointed male CFOs are more aggressive than the newly appointed female CFOs in managing earnings downwards during their first year on the job, possibly in an attempt

to take credit for better future performance. For a large sample of listed Chinese firms over the period 2001-06, Ye et al. (2010) find no association between gender of the firm's executive and its level of earnings management.

Gulzar and Wang (2011) investigate the efficiency of corporate governance characteristics in constraining earnings management for firms listed on the Shanghai and Shenzhen stock exchanges. Using discretionary accruals from the Modified Jones (1991) model to proxy for earnings management, they find a significantly positive association between earnings management and different corporate governance characteristics such as CEO duality, board meetings, female directors and concentrated ownership. They, however, do not specifically examine gender diversity and its relation to earnings management.

2.2 Women and corporate outcomes

Apart from accounting conservatism and earnings quality, the issue of gender differences in corporate decisions has spurred considerable research in the area. Papers have examined the role of women in the corporate setting by looking at different corporate outcomes such as firm performance, valuation, risk aversion etc. Once again, very few papers among these consider emerging economies and even fewer, India.

2.2.1 Women directors and firm performance/ valuation

Adams and Ferreira (2009) is by far, one of the most comprehensive works on the subject of gender diversity and corporate outcomes. They study the impact of the presence of women directors on both firm governance and performance. Using an unbalanced panel of director level data for S&P 500, S&P Midcaps and S&P Smallcap firms for 1996-2003, they find that gender diversity has significant impact on board inputs. Specifically, not only are women less likely to have attendance problems than men, their presence also improves the attendance behaviour of male directors on the board. Also, gender diversity enhances firm value only in firms with weak shareholder rights and reduces value in well- governed firms. Carter et al. (2010) study the relationship between the presence of women directors on the board and important board committees and firm performance in the context of the S&P 500 firms over the period 1998-2002. Results indicate that while firm performance, measured as firm ROA is positively associated with the number of women on board and its ethnic diversity, results using Tobin's q are insignificant. Using panel data on S&P 1,500 firms for the period 1992-2006, Dezso and Ross (2012) find a positive association between female representation in top management and firm performance, but only to the extent that a firm's strategy focuses on innovation.

Smith et al. (2006) examine the relationship between firm performance and women directors as also women in top management positions. Using a sample of the 2,500 largest Danish firms over 1993-2001, they find that women in top management jobs positively impact firm performance. This effect, however, depends strongly on the qualifications of these women managers. On the other hand, using a sample of all Danish firms listed on the Copenhagen stock exchange during 1998-2001, Rose (2007) fails to find any significant relationship between female board representation and firm value as measured by Tobin's q. Rovers (2013) finds that the presence of a woman director is positively associated with firm performance for a sample of 116 Dutch firms over the period 2005-07. Campbell and Vera (2008) find that the proportion of women on boards is positively associated with firm value for listed Spanish firms. Gyapong et al. (2016) find a positive association between board gender and ethnic diversity on firm value for 245 listed South African firms for the period 2008-13. Interestingly, other results indicate that while the presence of one woman on the board enhances firm value, with two female directors, firm value declines marginally and its impact is greatest when boards have three or more female directors. This falls in line with the critical mass theory that postulates that "one is a token, two is a presence, three is a voice." Interaction with measures for firm-level corporate governance indicates that the positive association between women directors and firm value is weaker in well-governed firms; however, the relationship remains positive and statistically significant. For a sample of 461 large banks from OECD countries, Gulamhussen and Santos (2010) find that the presence and proportion of women directors is positively associated with firm performance and value.

Sarkar and Selarka (2015) examine the impact of the presence of women directors on the boards of Indian companies and their performance. Using a sample of all manufacturing firms listed on the National Stock Exchange (NSE) over the period 2005-14, they find that the presence of female directors is positively associated with firm value. The positive relation holds only when these women are associated with the firm as independent directors and not members of the controlling family. Also, the positive women directors-firm value effect is weaker when members of the family occupy key managerial positions on the board. This is consistent with the serious type-2 agency problems pervasive in Indian family business groups. Darmadi (2013) examines the relationship between gender representation on the management board and financial performance of Indonesian listed firms. Cross-sectional results for the year 2007 indicate that both the presence and the proportion of women on the board is negatively related to firm performance, as measured by Tobin's q and ROA. Lam et al. (2013) examine the link between the presence of a female CEO and firm performance for listed Chinese firms for the period 2000-08. They find that while there is no significant link between CEO gender and firm performance, a female CEO is more likely to be observed in firms with at least one other

woman on board. Liang et al. (2013) study the impact of several board characteristics and performance for the 50 largest Chinese banks during the period 2003-10. They fail to find evidence in favour of female representation on the board and firm performance.

2.2.2. Women and other corporate outcomes

Gul et al. (2011) find that stock prices of gender diverse boards reflect more firm-specific information than comparatively less diverse boards. Further, the relationship is stronger for firms with weak corporate governance. For listed Australian firms over the period 2004-06, Adams et al. (2011) find that shareholders value gender per se. While the average market reaction to female director appointments is positive, market reaction to appointment of female directors in companies that have initiated steps to improve working conditions for women is positive and economically much higher than the reaction to male appointments.

Gul et al. (2008) examine whether the presence of female directors is related to higher audit effort for listed U.S. firms. They find evidence in favour of higher audit effort, as measured by a higher audit fee, in firms with a higher proportion of female directors and those with at least one woman director. This effect is more pronounced in cases of higher information asymmetry, more complexity and greater ethical dilemma. Ittonen et al. (2010) examines the association between women on the audit committee and the level of audit fees. Using a sample of the S&P 500 firms, they find that firms with female audit committee chairs have considerably lower audit fees. From the audit demand perspective, this could indicate that female audit committee chairs reduce the need for assurance provided by external auditors. Alternatively, from the supply-side perspective, female chairs and committee members may contribute to reducing the auditor's perception of audit risk by strengthening the financial reporting process, thereby resulting in a lower audit fees. Chapple et al. (2012) find that firms with boards comprising at least one woman director are less likely to receive a going concern audit opinion. This is consistent with greater risk aversion and higher monitoring levels of women directors.

Using a sample of S&P 1500 firms from 1994-2006, Francis et al. (2013) examine how bank loan contract are affected by the CFO gender, after controlling for known firm and loan characteristics. They find that, for their sample, female-CEO led firms enjoy lower bank interest rates, longer maturities and lower collateral requirements, compared to male-CFO led firms. This indicates that banks recognise that the presence of female CFOs is likely to be associated with lower informational risk ex ante and lower default risk, ex post. Palvia et al. (2015) examine whether bank capital ratios and default risk are associated with the gender of the bank's CEO and board chair. For a large sample of U.S. commercial banks for the period 2007-10, they find that female-led

banks have higher levels of capital, pointing to greater conservatism. Also, there is a negative relationship between female CEOs and female chairs and a bank failure during the crisis.

With a sample of 51 firms from the Fortune's 2009 Most Admired List, Bear et al. (2010) find that the proportion of women on board positively impact firm reputation through better Corporate Social Responsibility (CSR) ratings. Zhang and Jia (2012) find a significantly positive association between women on Chinese supervisory boards and corporate philanthropic contributions.

Francis et al. (2014) examine whether CFO gender affects tax aggressiveness. For a sample of 974 firm-year observations with 92 cases of male-to-female CFO transitions, they find that female CFOs are less tax aggressive than their male counterparts. This finding is consistent across several measures of tax aggressiveness. Huang and Kisgen (2013) compare financial and investment decisions of male and female executives. They find that female executive-led firms make fewer acquisitions, grow slower, and issue lesser debt. These findings are consistent with male executives being more over confident than women, in major corporate decisions. Atkinson et al. (2003) compare the performance and investment behaviour of male and female fixed-income mutual fund managers. They find no significant differences in terms of performance, risk, and other fund characteristics. They, however, find evidence in support of stereotypes against women managers suggesting that investors prefer to not invest in female manager-led funds owing to their belief about inferior competence in women managers. Levi et al. (2008) examine whether CEO gender affects the pricing and returns on mergers and acquisitions for a sample of over 400 acquisition attempts over the period 1997-2006. They find that for female CEOs, bidding premiums are nearly 70 percent smaller compared to cases where a male holds CEO position.

Niskanen et al. (2011) examine the role of auditor gender and earnings management in in small and medium-sized private Finnish firms. Using a sample of 3,900 firms over the period 1999-2006, they find that using the unsigned absolute value of accruals, female auditors are associated with greater discretion and conservatism in income reporting.

3. Hypotheses development

Based on the literature review in the previous section, we come up with the following hypotheses:

H1: There is a negative relationship between RPT volume and earnings quality – higher the volume of RPTs a firm undertakes, worse its earnings quality.

H2: The negative relationship between RPT volume and earnings quality is less negative (weaker) in the presence of female, independent and nominee directors on the audit committee.

H3: The negative relationship between RPT volume and earnings quality is less negative (weaker) in the presence of higher institutional holding in the firm.

H4: The negative relationship between RPT volume and earnings quality is more negative (stronger) in the presence of promoter directors on the audit committee.

4. Data and Methodology

4.1 Data: Sources and Sample

Data on financial variables comes from the CMIE Prowess database. Prowess is managed by the Centre for Monitoring Indian Economy Pvt. Ltd. (CMIE) and is by far the largest database for financial performance of both listed and unlisted Indian companies. Its primary data source is the annual reports of companies covered. Board-level data on director and audit committee characteristics comes from the Prime database. Even when Prime is rather comprehensive in its coverage of board characteristics of NSE listed firms through its information on director names, age, qualifications, committee membership, independent/ promoter/ executive status etc., we were unable to find audit committee data for about two-fifths of our total sample of NSE 500 firms. We, therefore, had to resort to hand-collection of these variables from the Corporate Governance section of the missing firms' annual reports. This was a time-consuming process, and therefore, we had to restrict our sample to include the top 500 firms only and not a broader NSE-listed universe.

For the purpose of this paper, financial data on the Nifty 500 firms (earlier called CNX 500), has been extracted for the years starting 1999, for the entire period for which it is available. This is done to ensure sufficient number of observations for the Jones accrual-prediction model, owing to high missing data. We start with the year 1999 because post this year, Prowess' reporting of financial data gets considerably better, both in terms of quantity as well as accuracy. Of the Nifty 500 firms, exclusions are made for firms in the finance and banking industry (2-digit NIC code 64), and State-owned firms (Prowess ownership code 10101000000, 20402000000 and 10201000000). This results in an initial sample of 383 firms. Of these, observations with negative values on total assets and net sales are dropped. Finally, observations with missing values of current assets, cash and bank, current liabilities, depreciation, total assets, net sales, gross fixed assets and NIC code are dropped. This is done to ensure non-missing accrual values using the Jones accrual prediction model.

For the purpose of computing Jones (1991) discretionary accruals, our sample consists of an unbalanced panel comprising 5,010 firm-year observations for the period 1999-2015. Discretionary accruals for the financial year ended March 31, 2014 and March 31, 2015 are computed and saved, to be merged with other financial variables and audit committee characteristics.

Merging the datasets reduces the size of the dataset drastically. This is particularly because of large missing values for RPTs and several financial variables such as institutional holdings and of course, audit committee characteristics. The final merged sample used for baseline regression comprises 236 firms for the financial years ended 2014 and 2015, resulting in a total of 403 firm-year observations for our empirical tests.

4.2 Variable Definitions

4.2.1 Earnings Management (EM)

(a) Jones (1991)

Our main measure of EM is discretionary accruals as in the Industry model of Jones (1991). For each firm *i* in 2-digit industry *j*, Total Accruals (TACC) are regressed on three variables, namely the reciprocal of lagged total assets, sales growth and gross fixed assets (all scaled by lagged total assets). The regression in run for each two-digit industry code and financial year, ensuring a minimum of 4 observations in each industry-year combination. Model parameters in this case are estimated separately for each *i* based on a cross-section of all firms in its 2-digit NIC code for each year *t*.

The residuals from the regression (DACC) are then computed for each *i* and used as the dependent variable.

Total Accruals are defined as in Jones (1991).

$TACC_t = [\Delta CA - \Delta Cash] - [\Delta CL - Depr_t - Amort_t]$

Where,

TACC is Total Accruals,

Δ represents change in levels from year *t-1* to *t,*

CA is Current Assets,

CL is Current Liabilities,

Depr is depreciation,

Amort is amortisation expense

$TACC_{i,t} / A_{i,t-1} = \alpha_i [1/ A_{i,t-1}] + \beta_{1i} [\Delta Rev_{i,t} / A_{i,t-1}] + \beta_{2i} [PPE_{i,t} / A_{i,t-1}] + \varepsilon_{i,t}$

$\varepsilon_{i,t} = DACC_{i,t}$ = Discretionary accruals for firm *i* in year *t*

Where,

$A_{i,t-1}$ is the lagged value of total assets for firm i

Δ Rev is the change in net sales from year *t-1* to *t*

PPE is the gross value of property plant and equipment

Consistent with Ball and Shivakumar (2008), we include three additional explanatory variables in predicting discretionary accruals, namely Cash from operations, a dummy variable for negative cash from operations and a term interacting the two.

The revised specification becomes:

$TACC_{i,t} / A_{i,t-1} = \alpha_i [1/ A_{i,t-1}] + \beta_{1i} [\Delta Rev_{i,t} / A_{i,t-1}] + \beta_{2i} [PPE_{i,t} / A_{i,t-1}] + \beta_{3i} [CFO_{i,t}] + \beta_{4i} [DCFO_{i,t}] + \beta_{5i} [CFO * DCFO_{i,t}] \varepsilon_{i,t}$

Where,

$CFO_{i,t}$ is the Cash from Operations for firm *i* in year *t*

$DCFO_{i,t}$ is a dummy variable that assumes a value of one for negative CFO for firm *i* in year *t*

$CFO * DCFO_{i,t}$ is an interaction term for CFO and DCFO for firm *i* in year *t*

(b) Modified Jones:

This has been used as part of our sensitivity analysis as an alternate measure of earnings management. This version of the Jones (1991) model considers the fact that changes in receivables could also reflect earnings management and therefore, aims at reducing the value of the change in revenue by the amount of change in the net value of receivables. While TACC is defined similarly as in Jones (1991), discretionary accruals are estimated as under:

$$TACC_{i,t} / A_{i,t-1} = \alpha_i [1/ A_{i,t-1}] + \beta_{1i} [(\Delta Rev_{i,t} - \Delta Rec_{i,t})/ A_{i,t-1}] + \beta_{2i} [PPE_{i,t} / A_{i,t-1}] + \varepsilon_{i,t}$$

Where,

$\Delta Rec_{i,t}$ is the change in net receivables from year *t-1* to *t*

Consistent with Ball and Shivakumar (2008), we include two additional variables on the right-hand-side, namely Cash from Operations (CFO) and a dummy that assumes a value of one for negative cash from operations for the year (DCF). Also, in line with Larcker et al. (2007), we include a proxy for expected firm growth, namely its book-to-market ratio (BTM). These additional variables are used jointly, irrespective of the method used to predict accruals.

4.2.2 Audit committee characteristics

A. Female representation on the audit committee

This is the key independent variable of interest. Consistent with prior work, it is measured in several different ways. These are:

Indicator variables:

Dummy that equals one if there is at least one woman director on the committee

Dummy that equals one if the committee chair is a woman

Continuous variables:

Proportion of women to total committee size

B. Other AC characteristics:

Indicator variables:

Dummy that equals one if there is at least one promoter director on the committee

Dummy that equals one if an independent director is Chair of the committee

Continuous variables:

Size of committee

Proportion of independent directors to total committee size

Number of promoter and nominee directors on committee

4.2.3 Firm-level Corporate Governance

Percentage of non-promoter institutional holdings in the firm (CMIE Prowess)

4.2.4 Related Party Transactions

These have been extracted from the CMIE Prowess database. While accounting regulation requires firms to report RPTs by nature of transactions and parties with whom these have been undertaken, we focus not on the nomenclature of the transaction, but on total volume. For this purpose, we take the absolute value of the sum of all RPTs during the financial year in question and scale it by the contemporaneous book value of total assets. This ratio is used as the measure of RPTs.

4.2.5 Controls:

Based on previous literature, the following control variables are introduced in the regression specification. These are:

Firm age: Number of years since incorporation of the firm

Firm size: Log of book value of contemporaneous total assets

Leverage: Total Debt/ Book value of contemporaneous total assets

Regression specification:

To estimate the relationship between female representation on the board and earnings management, the following cross-sectional specification is run:

$$DACC_{i,t} = \beta_1 RPT\ to\ TA_{i,t} + \beta_2 AC\ Size_{i,t} + \beta_3 \%\ Female_{i,t} + \beta_4 \%\ Independent_{i,t} + \beta_5 Promoter\ on\ AC_{i,t} + \beta_6 Woman\ AC\ Chair_{i,t} + \beta_7 Independent\ AC\ Chair_{i,t} + Controls_{i,t} + \varepsilon_{i,t}$$

Where,

DACC is the Industry Jones (1991) discretionary accruals

RPT to TA is the ratio of the sum of absolute RPTs to the book value of total assets

AC Size is the size of the audit committee

% Female is the ratio of women directors on the audit committee to total committee size

% Independent is the ratio of independent directors on the audit committee to total committee size

Promoter on AC is a dummy that assumes a value of 1 if a promoter director sits on the audit committee

Woman AC Chair is a dummy that equals 1 if a woman in the chair of the audit committee

Independent AC Chair is a dummy that equals one if an independent director is the chair of the audit committee

i represents the firm and *t*, the year

In this specification, our key coefficient of interest is β_1. It is expected to capture the impact of RPTs in earnings management, in the absence of women directors on the audit committee.

In our next set of regressions, we introduce interaction terms of our key explanatory variable *RPT to TA* with variables that measure the presence of women on audit committees as well as other governance variables. The coefficient on the interaction term is expected to explain whether the RPT-earnings management relationship is affected by the presence of women directors on the audit committee.

5. Results

5.1 Descriptive Statistics

Table 1 presents the summary statistics for key variables in our study for the financial year ended March 2015. The mean and median of our key explanatory variable RPTs (sum of absolute values) is 31,775.77 and 6,248.50 respectively. Given the high degree of skewness in this variable as well as significant differences in size of firms in our sample, we choose to use for empirical tests, the ratio of RPTs to book value of contemporaneous total assets (*RPT to TA*). For the *RPT to TA* variable, we can see that the mean and median are 0.3598 and 0.2262, respectively, implying that on average, firms engage in RPTs equalling almost a quarter of their asset bases, in book value terms.

Our key variable for earnings management, discretionary accruals has mean and median values of 0.0004 and 0, respectively. The highest value for accruals is 0.0939. This must be considered as a ratio of discretionary accruals to total assets, given the way in which the variable is defined and computed. As expected, we see higher corresponding values for absolute discretionary accruals. Coming to audit committee variables, we see that while most committees have a size of three, committees as small as two and as large as seven are also observed. Talking about female representation on the committee, we are rather surprised to find that despite regulatory requirements in the direction of gender diversity and female representation, only about 4 percent of the total committee strength can be attributed to women, the other 96% being still dominated by male directors. In our final sample of 236 firms, there are only six firms with committees that comprises two women. Most others have either no or just one women on the committee. It must be noted that gender-diversity studies document two or more women on boards and committees as an indicator or women power in the firm concerned. For an average committee size of three members, the mean number of independent directors (IDs) is 2.95. This is encouraging since statutory requirements mandate only two-thirds of IDs on audit committees in India, unlike several developed economies where such committees must be fully independent. Unfortunately, nearly 27% of all audit committees have a member of

the promoter group as a member. In our sample, however, we do not find any case of a promoter chair of the audit committee. Nearly 6% of all audit committees have a nominee director as a member, usually representing creditor interest. In nearly 2% our sample, a woman director occupies the position of the chair of the committee. As expected, in almost all cases, the chair of the audit committee is independent.

Coming to control variables, the average (median) age of a sample firm is 40 (30) years. The oldest firm in the sample is over a century old. This is not surprising given that the sample comprises the largest 500 NSE-listed Indian firms. Leverage, which is measured as the ratio of Debt to Book value of total assets has a mean (median) value of 0.25 (0.22), with the highest value being nearly 77% of book asset value. % Institutional holdings, our measure of firm-level corporate governance has a mean (median) value 23.55 (20.51). Total assets, our measure of firm size has a mean (median) value of 86,271.51 (29,730.30) million rupees. Clearly, there is a high degree of skewness in this variable. For this reason, we use the natural logarithm of total assets as our measure of firm size in our empirical tests. Similarly, net sales has a mean and median value of 51,844.71 and 20,956.70 in millions of rupees, respectively.

Table 2 presents the correlation matrix for key variables in this study. The table provides interesting insights into pairwise relationships, as a first step, before formal regressions are carried out. Results here indicate that our main measure of earnings management, Discretionary accruals are positively and significantly related to the proportion of independent directors on the audit committee (significantly), firm age (significantly), the number of women and independent directors on the audit committee and institutional ownership. Similarly, Discretionary accruals are negatively related to audit committee size, the presence of promoter and nominee directors on the audit committee and leverage. This time also, there are no statistically significant coefficients.

The matrix also points to some other interesting insights. For instance, we see that the presence of women on audit committees is positively and significantly related to firm size (both in terms of total assets and net sales) and to the proportion of institutional holding in the firm. This could imply that larger firms tend to have greater openness to having women on their committees (and boards) than smaller ones. We also find that the percentage of independent directors on the audit committee varies positively with firm age and institutional holding in the firm. This could imply that larger firms could be more open to having women on audit committees and also that institutional investors are more willing to invest in firms with better governance as measured by audit committee independence. We also find that promoter presence on the audit committee is negatively associated with firm age and firm size. Finally, we find that the degree of institutional holding in the firm varies positively and significantly with firm size, firm age, and the number of women, nominee and independent directors on the audit committee. This is not surprising since it merely points towards institutional investors' incentives to invest in better governed firms.

Also, the relation between leverage and institutional holdings is negative, highlighting the substitutability of both as alternate corporate governance mechanisms.

Broad industry classifications along with their corresponding 2-digit NIC codes are presented in Appendix A.

5.2 Effect of Related Party Transactions and Audit committee characteristics on earnings management

This is the primary area of investigation in the paper. Table 3 presents regression results of Industry-adjusted Discretionary Accruals (our measure of earnings management) on the *RPT ratio*, audit committee variables and other controls. The final sample for regression comprises 236 firms representing 403 firm-year observations. Since the sample is an unbalanced panel for the financial years ended March 31, 2014 and 2015, year and firm fixed effects have been included in all regressions. Also, to avoid extreme values, all continuous variables have been winsorized at the 1st and 99th percentile.

Unfortunately, we are unable to find any statistical significance on any variable included in the regression. We attribute this to the small sample size used for conducting the empirical analysis.

However, since our objective is to examine the differential impact of gender diversity on audit committees on the RPT-earnings management relationship, we introduce interaction terms of certain corporate governance variables, including the presence of women on audit committees with the *RPT Ratio* in our regression specification. Results are presented in Table 4.

In all of the six columns, the dependent variable is the same – industry-adjusted discretionary accruals. It is noteworthy that we find similar results when we use Modified Jones discretionary accruals as an alternate measure of earnings management. While explanatory variables are the same as in Table 4 across all columns, the interaction terms with *RPT Ratio* differ. For instance, in column 1, the *RPT Ratio* is interacted with the % of women on the audit committee, with % independent members on the audit committee in column 2 and so on.

In columns 1 and 4, we find a negative and statistically significant sign on the variable RPT ratio which is our primary independent variable of interest. The negative sign seems to suggest that contrary to popular belief, higher RPT in fact tend to reduce discretionary accruals, in the presence of audit committee variables. This is consistent with better earnings quality. In two columns out of 6, we find a positive and statistically significant coefficient on Audit Committee size. Given the way earnings quality is measured, this implies that smaller committees result in better earnings quality. We fail to find any

significance on % female representation and % independent directors on the audit committee. A significant thing to note in the test results in the positive and statistically significant sign on the coefficient for the dummy that captures promoter representation on the audit committee. This implies that the presence of promoters on the audit committee actually reduces earnings quality. In columns 1 and 4, we find a positive and statistically significant sign on the interaction terms between the RPT ratio and the dummy for an Independent audit committee chair. We are unable to interpret this positive sign.

5.3 Effect of Audit Committee characteristics on Earnings Management

Given our weak findings of the relationship between the volume of RPTs and earnings quality, we also investigate the direct relationship, if any, between audit committee characteristics and earnings quality. Since it is the audit committee that is primarily responsible for overseeing independence in the reporting process and ultimately, financial reporting quality, we expect to find a positive relationship between better governance on the audit committee and earnings quality. For this purpose, we drop the RPT variable earlier included in the regression specification.

Results are presented in Table 5.

Just as in Tables 3 and 4, we fail to find any significance on any of the explanatory variables included in the regression. The small level of significance obtained on *Promoter on Committee* in Table 4 is also lost after *RPT Ratio* is dropped from the regression.

6. Conclusion

The paper attempts to examine the impact of gender diversity and female representation on audit committees on the relationship between related party transactions and earnings management in Indian firms. The issue assumes critical importance largely due to two reasons – RPTs are a serious threat to corporate governance in India, particularly in light of the complexity and opacity inherent in the way Indian business groups are organised and second, great emphasis on female representation in the corporate board room by the SEBI, the Indian capital markets regulator. In fact, SEBI has mandated the presence of at least one woman director on the board of every listed company by March 31, 2015. There is huge literature in almost all academic disciplines to support the view that women are more conservative, far-sighted and risk-averse compared to their male counterparts and much more sensitive to ethical concerns. In fact, corporate finance and accounting literature document significant improvements in standards of accounting of quality, governance and ethical corporate behaviour in the presence of women on boards. Another regulatory reform that motivates the paper is the absolute power granted to audit committees of listed

companies w.e.f. April 1, 2014, to approve RPTs before they take place, rather than ratify them once they have already happened. This, coupled with women on boards, is expected to improve the financial implications of RPTs that finally take place.

In the light of the SEBI mandate, the paper attempts to examine three things – first, the level of compliance with the new mandate in terms of inducting a woman director on board by March 31, 2015; second, the evidence in favour of better earnings quality (or lower earnings management) as a consequence of having women on boards and finally, how gender diversity impacts the RPT-earnings management relationship.

For this purpose, we compile data on financial and audit committee variables for a sample of the Nifty-500 firms for the year ended March 31, 2014 and 2015, with a view to be able to compare outcomes both before and after the new regulation took effect. After making exclusions for financial and State-owned firms and those with missing values on key variables, our final sample for empirical tests contains 236 firms, representing 403 firm-year observations for non-missing values on all key variables.

While we observe a weak relationship between the RPT volume and earnings quality, we fail to find any relationship between other audit committee characteristics and earnings quality. We attribute this to the small sample size used to conduct this study. One significant result in the paper is the positive relation between promoter presence on the audit committee and poor earnings quality. This is by far the first paper to document this from an audit committee perspective, at least in the Indian context.

The paper offers several interesting insights such as the substitutability of leverage and the presence of independent directors on audit committees. Also, the paper throws light on existing standards of governance in Indian firms, as it stands today. For instance, we find that in nearly 27% of the cases studied, a member of the promoter group sits on the audit committee. This is far from encouraging. While the purpose of the audit committee is to provide an independent and unbiased platform to statutory auditors to discuss their findings and material discrepancies with independent and financially literate members of the committee, the presence of a promoter director defeats the very purpose of a purportedly 'fair and frank' decision. It is a no-brainer that corporate governance systems, including the supposedly most crucial, the audit committee, are designed to protect the interest of the minority and dispersed shareholders rather than that of the promoter group. Presence of promoters on the audit committee appears to be a step in the wrong direction. Also, in interpreting these results, we must keep in mind that what we really are observing are statistics relating to the largest 500 firms listed on the National Stock

Exchange, which, purportedly, must be 'the best' in terms of corporate governance, at least, theoretically. This gives us some sense of how disrupted and ineffective things may be with smaller, and lesser-known firms.

While this paper is at a rather nascent stage, particularly given its small sample size, we aim at not only increasing the number of firms studied for empirical tests, but also apply robustness tests for endogeneity, to be able to rule out concerns about causality. Also, even for this version of the paper, we tried to compile two additional audit committee variables, namely average age of audit committee members and number of finance experts on the audit committee. However, given the number of missing observations in the data received from the Prime database and lack of complete disclosure in company annual reports, we ended up not using them in our empirical tests.

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Appendix 1: Industry descriptions at the 2-digit NIC level[1]

2-digit NIC code	Industry group
	A. Agriculture, forestry and fishing
01	Agriculture, forestry and fishing
02	Forestry and logging
03	Fishing and aquaculture
	B. Mining and quarrying
05	Mining of coal and lignite
06	Extraction of crude petroleum and natural gas
07	Mining of metal ores
08	Other mining and quarrying
09	Mining support service activities
	C. Manufacturing
10	Manufacture of food products
11	Manufacture of beverages
12	Manufacture of tobacco products
13	Manufacture of textiles
14	Manufacture of wearing apparel
15	Manufacture of leather and related products
16	Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
17	Manufacture of paper and paper products
18	Printing and reproduction of recorded media

[1] Source: "National Industrial Classification (All Economic Activities)", Central Statistical Organization, 2009

19	Manufacture of coke and refined petroleum products
20	Manufacture of chemicals and chemical products
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products
22	Manufacture of rubber and plastics products
23	Manufacture of other non-metallic mineral products
24	Manufacture of basic metals
25	Manufacture of fabricated metal products, except machinery and equipment
26	Manufacture of computer, electronic and optical products
27	Manufacture of electrical equipment
28	Manufacture of machinery and equipment n.e.c.
29	Manufacture of motor vehicles, trailers and semi-trailers
30	Manufacture of other transport equipment
31	Manufacture of furniture
32	Other manufacturing
33	Repair and installation of machinery and equipment
	D. Electricity, gas, steam and air conditioning supply
35	Electricity, gas, steam and air conditioning supply
	E. Water supply; sewerage, waste management and remediation activities
36	Water collection, treatment and supply
37	Sewerage
38	Waste collection, treatment and disposal activities; materials recovery
39	Remediation activities and other waste management services
	F. Construction

41	Construction of buildings
42	Civil engineering
43	Specialized construction activities
	G. Wholesale and retail trade; repair of motor vehicles and motorcycles
45	Wholesale and retail trade and repair of motor vehicles and motorcycles
46	Wholesale trade, except of motor vehicles and motorcycles
47	Retail trade, except of motor vehicles and motorcycles
	H. Transportation and Storage
49	Land transport and transport via pipelines
50	Water transport
51	Air transport
52	Warehousing and support activities for transportation
53	Postal and courier activities
	I. Accommodation and Food service activities
55	Accommodation
56	Food and beverage service activities
	J. Information and communication
58	Publishing activities
59	Motion picture, video and television programme production, sound recording and music publishing activities
60	Broadcasting and programming activities
61	Telecommunications
62	Computer programming, consultancy and related activities
63	Information service activities
	K. Financial and insurance activities

64	Financial service activities, except insurance and pension funding
65	Insurance, reinsurance and pension funding, except compulsory social security
66	Other financial activities
	L. Real Estate activities
68	Real estate activities
	M. Professional, scientific and technical activities
69	Legal and accounting activities
70	Activities of head offices; management consultancy activities
71	Architecture and engineering activities; technical testing and analysis
72	Scientific research and development
73	Advertising and market research
74	Other professional, scientific and technical activities
75	Veterinary activities
	N. Administrative and support service activities
77	Rental and leasing activities
78	Employment activities
79	Travel agency, tour operator and other reservation service activities
80	Security and investigation activities
81	Services to buildings and landscape activities
82	Office administrative, office support and other business support activities
	O. Public administration and defence; compulsory social security
84	Public administration and defence; compulsory social security
	P. Education
85	Education

	Q. Human health and social work activities
86	Human health activities
87	Residential care activities
88	Social work activities without accommodation
	R. Arts, entertainment and recreation
90	Creative, arts and entertainment activities
91	Libraries, archives, museums and other cultural activities
92	Gambling and betting activities
93	Sports activities and amusement and recreation activities
	S. Other service activities
94	Activities of membership organizations
95	Repair of computers and personal and household goods
96	Other personal service activities
	T. Activities of households as employers; undifferentiated goods- and services producing activities of households for own use
97	Activities of households as employers of domestic personnel
98	Undifferentiated goods- and services-producing activities of private households for own use
	U. Activities of extraterritorial organizations and bodies
99	Activities of extraterritorial organizations and bodies

Appendix B: Variable definitions

Variable	Description	Calculation
Dependent Variable:		
Industry-Adjusted Jones Discretionary Accruals	Earnings management	
Key explanatory Variable:		
RPT Ratio	Volume of RPTs during the year	Sum of absolute RPTs during the year/ Total Assets
Audit Committee Variables:		
Continuous Variables:		
AC Size	Size of committee	
AC Female	Number of women directors	
AC Independent	Number of independent directors	
AC Promoter	Number of promoter directors	
AC Nominee	Number of nominee directors	
% Female	% women on committee	AC Female/ AC Size
% Independent	% independent directors on committee	AC Independent/ AC Size
Dummy Variables:		
Woman AC Chair	Dummy = 1 if Woman Chair	
Promoter on AC	Dummy = 1 if Promoter on AC	
Independent AC Chair	Dummy = 1 if Independent Chair	
Control Variables - Others:		
Age	Firm age (in years)	
Leverage	Debt to assets ratio	Debt/ Total Assets
% Institution	Firm-level corporate governance	% Institutional holdings as at year-end
Firm Size	Log (Total Assets)	

Table 1

Summary Statistics

The sample consists of NSE listed firms for the financial year ended 2014 and 2015. All variables are defined in Appendix A. All continuous variables are winsorized at the 1st and 99th percentile. The table reports univariate statistics for the entire sample.

	Mean	Median	Min	Max	N
Key Explanatory Variable:					
RPT value (Rupees million)	31775.77	6248.5	5.4	4,90,016	733
Ratio of RPT to Total Assets	0.3598	0.2262	0.0032	2.0496	582
Earnings Management Variables:					
Discretionary accruals	0.0004	0	-0.1034	0.0939	600
Absolute Discretionary accruals	0.0250	0.0177	0	0.1982	600
Audit Committee Variables:					
Continuous Variables:					
Size of committee	3.6232	4	2	7	629
Number of women directors	0.1574	0	0	2	629
Number of independent directors	2.9506	3	0	6	628
Number of promoter directors	0.2707	0	0	2	628
Number of nominee directors	0.0590	0	0	1	627
% women on committee	0.04150	0	0	0.5	623
% independent on committee	0.8272	0.775	0.2	1	622
Dummy Variables:					
Dummy = 1 if Woman Chair	0.0159	0	0	1	629
Dummy = 1 if Promoter Chair	0	0	0	0	627
Dummy = 1 if Independent Chair	0.9522	1	0	1	627
Control Variables:					
Firm age (in years)	39.7381	30	9	113	695
Leverage	0.2488	0.2180	0.0003	0.7699	581
% Institutional holdings	23.5535	20.51	0.76	66.41	947
Total Assets (Rupee millions)	86,271.51	29,730.3	2,292.8	8,95,969.6	695
Net Sales (Rupee millions)	51,844.71	20,956.7	259.7	5,52,605	695

Table 2: **Correlations among variables of interest**

The sample consists of NSE listed firms for the financial year ended 2014 and 2015. All variables are defined in Appendix A. All continuous variables are winsorized at the 1st and 99th percentile. The matrix below reports pairwise correlation coefficients between variables of interest and the p-value.

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
1 – RPT to Total Assets	1														
2 – Discretionary Accruals	0.0472	1													
	(0.2919)														
3- Absolute Discretionary Accruals	0.1095	-0.0202	1												
	(0.0142)	**(0.6223)**													
4 – AC Size	0.1241	-0.0045	-0.0404	1											
	(0.0050)	**(0.9184)**	**(0.3552)**												
5 – Number of women on AC	-0.0093	0.0410	-0.0529	0.1317	1										
	(0.8338)	**(0.3475)**	**(0.4588)**	**(0.0009)**											
6 – Number of IDs on AC	0.0915	0.0531	0.0358	0.7538	0.0657	1									
	(0.0389)	**(0.2239)**	**(0.5719)**	**(0.0000)**	**(0.1000)**										
7 – Number of promoters on AC	-0.0076	-0.0216	0.0720	0.02124	-0.0737	-0.0738	1								
	(0.8635)	**(0.6206)**	**(0.2546)**	**(0.0000)**	**(0.0650)**	**(0.0646)**									
8 – Number of NDs on AC	-0.0200	-0.0409	0.0133	0.1218	0.0693	-0.0431	-0.0425	1							
	(0.6525)	**(0.3491)**	**(0.8333)**	**(0.0022)**	**(0.829)**	**(0.2815)**	**(0.2879)**								
9 - % women on AC	-0.0103	0.0419	-0.0714	0.0361	0.9695	-0.0191	-0.0791	0.0597	1						
	(0.8172)	**(0.3395)**	**(0.2591)**	**(0.3686)**	**(0.0000)**	**(0.6343)**	**(0.0487)**	**(0.1371)**							
10 - % IDs on AC	-0.0303	0.0783	0.0086	-0.1635	-0.0629	0.5062	-0.4399	-0.2066	-0.0688	1					
	(0.4975)	**(0.0740)**	**(0.8923)**	**(0.0000)**	**(0.1169)**	**(0.0000)**	**(0.0000)**	**(0.0000)**	**(0.0864)**						
11 – Firm age (in years)	-0.1244	0.0246	-0.0075	-0.0100	0.0077	0.0683	-0.0788	-0.0071	0.0170	0.1204	1				
	(0.0027)	**(0.5468)**	**(0.9057)**	**(0.8065)**	**(0.8498)**	**(0.0930)**	**(0.0528)**	**(0.8622)**	**(0.6778)**	**(0.0032)**					
12 – Debt to Total Assets	0.0179	-0.0199	-0.0463	-0.0670	-0.0074	-0.0191	-0.0207	0.0332	0.0035	0.0476	-0.0082	1			
	0.6920	**(0.6654)**	**(0.4641)**	**(0.1157)**	**(0.8618)**	**(0.6540)**	**(0.6277)**	**(0.4374)**	**(0.9347)**	**(0.2676)**	**(0.8439)**				
13 - % Institutional holdings	-0.0262	0.0143	0.0158	0.0298	0.0909	0.0729	-0.0576	0.0866	0.0909	0.1002	0.1240	-0.1375	1		
	(0.5332)	**(0.7303)**	**(0.8023)**	**(0.4613)**	**(0.0242)**	**(0.0715)**	**(0.1546)**	**(0.0322)**	**(0.0249)**	**(0.0135)**	**(0.0013)**	**(0.0000)**			
14 – Total Assets (Rs. Millions)	0.0176	0.0185	-0.0570	-0.0012	0.1270	0.0390	-0.1244	0.0281	0.1316	0.0600	0.0689	0.1801	0.2338	1	
	(0.6715)	**(0.6508)**	**(0.3677)**	**(0.9774)**	**(0.0017)**	**(0.3377)**	**(0.0022)**	**(0.4905)**	**(0.0012)**	**(0.1422)**	**(0.0694)**	**(0.0000)**	**(0.0000)**		
15 – Net Sales	0.0121	0.0497	-0.0117	0.0302	0.1602	0.0623	-0.1474	0.0248	0.1657	0.0531	0.1126	0.0220	0.2728	0.8268	1
	(0.7713)	**(0.2237)**	**(0.8529)**	**(0.4587)**	**(0.0001)**	**(0.1261)**	**(0.0003)**	**(0.5434)**	**(0.0000)**	**(0.1944)**	**(0.0030)**	**(0.5959)**	**(0.0000)**	**(0.0000)**	

Table 3: Effect of Related Party Transactions and Audit committee characteristics on earnings management

The sample consists of the CNX-500 firms for the financial year ended 2014 and 2015. All variables are defined in Appendix A. Earnings quality is measured as the value of discretionary accruals as in Jones (1991). All continuous variables, including discretionary accruals, are winsorized at the 1st and 99th percentile. Regression includes firm and year fixed effects The symbols ***, ** and * denote significance at the 1%, 5% and 10%, respectively.

Dependent variable: Discretionary Accruals	
RPT ratio	-0.010
	(-1.10)
AC Size	0.007
	(1.64)
% Female	0.019
	(0.42)
% Independent	0.032
	(1.45)
AC Dummies:	
	0.019
Promoter on committee	(1.62)
	-0.063
Woman AC Chair	(-1.14)
	-0.002
Independent AC Chair	(-0.13)
Other controls:	
Age	-0.019
	(-0.74)
Leverage	0.040
	(0.89)
% Institution	-0.000
	(-0.01)
Firm size	0.040
	(1.28)
Constant	0.300
	(0.27)
N	403
Number of firms	236
R^2	0.078

Table 4: Effect of Related Party Transactions on earnings management in the presence of Audit committee characteristics

The sample consists of the CNX-500 firms for the financial year ended 2014 and 2015. All variables are defined in Appendix A. Earnings quality is measured as the value of discretionary accruals as in Jones (1991). All continuous variables, including discretionary accruals, are winsorized at the 1st and 99th percentile. Regression includes firm and year fixed effects The symbols ***, ** and * denote significance at the 1%, 5% and 10%, respectively.

	Dependent variable: Discretionary Accruals					
	(1)	(2)	(3)	(4)	(5)	(6)
RPT ratio	-0.016*	-0.009	-0.013	-0.055**	0.008	-0.012
	(-1.75)	(-0.28)	(-1.35)	(-2.21)	(0.23)	(-1.22)
AC size	0.007*	0.007	0.006	0.006	0.008	0.007*
	(1.74)	(1.63)	(1.62)	(1.58)	(1.63)	(1.69)
% Female	-0.053	0.019	0.024	0.016	0.015	0.018
	(-1.00)	(0.42)	(0.54)	(0.36)	(0.33)	(0.41)
% Independent	0.031	0.033	0.035	0.027	0.031	0.032
	(1.44)	(1.26)	(1.57)	(1.21)	(1.41)	(1.44)
AC Dummies:						
Promoter on committee	0.020*	0.019	0.021*	0.019	0.018	0.014
	(1.76)	(1.61)	(1.79)	(1.63)	(1.55)	(1.02)
Woman AC Chair	-0.070	-0.063	-0.077	-0.058	-0.053	-0.067
	(-1.28)	(-1.13)	(-1.36)	(-1.06)	(-0.91)	(-1.20)
Independent AC Chair	-0.002	-0.002	-0.002	-0.020	-0.001	-0.001
	(-0.14)	(-0.12)	(-0.16)	(-1.21)	(-0.08)	(-0.09)
Other controls:						
Age	-0.016	-0.019	-0.019	-0.020	-0.017	-0.018
	(-0.65)	(-0.73)	(-0.73)	(-0.77)	(-0.68)	(-0.70)
Leverage	0.042	0.040	0.037	0.038	0.039	0.041
	(0.97)	(0.89)	(0.84)	(0.87)	(0.89)	(0.92)
% Institution	0.000	-0.000	0.000	-0.000	-0.000	0.000
	(0.06)	(-0.00)	(0.07)	(-0.46)	(-0.06)	(0.09)
Firm Size	0.038	0.040	0.037	0.040	0.039	0.042
	(1.23)	(1.28)	(1.19)	(1.29)	(1.23)	(1.33)
RPT ratio * % Female	0.147**					
	(2.41)					
RPT ratio * % Independent		-0.001				
		(-0.03)				
RPT ratio * Woman AC Chair			0.024			
			(0.96)			
RPT ratio * Independent AC Chair				0.047*		
				(1.94)		

RPT ratio * AC size					-0.004	
					(-0.52)	
RPT ratio * Promoter on AC						0.008
						(0.53)
Constant	0.219	0.296	0.317	0.364	0.250	0.244
	(0.20)	(0.26)	(0.28)	(0.33)	(0.22)	(0.22)
N	403	403	403	403	403	403
Number of firms	236	236	236	236	236	236
R^2	0.112	0.078	0.084	0.100	0.080	0.080

Table 5: Effect of Audit committee characteristics on earnings management

The sample consists of the CNX-500 firms for the financial year ended 2014 and 2015. All variables are defined in Appendix A. Earnings quality is measured as the value of discretionary accruals as in Jones (1991). All continuous variables, including discretionary accruals, are winsorized at the 1st and 99th percentile. Regression includes firm and year fixed effects. The symbols ***, ** and * denote significance at the 1%, 5% and 10%, respectively.

Dependent variable: Discretionary Accruals	
AC Size	0.006
	(1.55)
% Female	0.015
	(0.34)
% Independent	0.031
	(1.40)
AC Dummies:	
	0.018
Promoter on committee	(1.55)
	-0.048
Woman AC Chair	(-0.90)
	-0.000
Independent AC Chair	(-0.02)
Other controls:	
Age	-0.019
	(-0.76)
Leverage	0.038
	(0.85)
% Institution	0.000
	(0.15)
Firm size	0.041
	(1.30)
Constant	0.310
	(0.28)
N	403
Number of firms	236
R^2	0.071